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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,551	03/09/2004	H. Thomas Graef	D-1217 R3	1996
28995	7590	03/20/2006		
RALPH E. JOCKE walker & jocke LPA 231 SOUTH BROADWAY MEDINA, OH 44256			EXAMINER NICHOLSON III, LESLIE AUGUST	
			ART UNIT 3651	PAPER NUMBER

DATE MAILED: 03/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/796,551	<b>Applicant(s)</b> GRAEF ET AL.	
	<b>Examiner</b> Leslie A. Nicholson III	<b>Art Unit</b> 3651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 2/23/2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments and Amendments*

1. Due to amendments, objections to the specification are hereby withdrawn.

Regarding the Applicant's arguments of the drawing objections, the Examiner would like to make it known to the Applicant that the Examiner has earned multiple degrees in engineering from an accredited university and has been working in the field long enough to be considered "one skilled in the art". From viewing the figures in question for each drawing objection, the reference characters clearly point to the same object. The first and second objections made in the non-final action, dated 10/28/2005, to the drawings stands. Due to amendment, the third objection is hereby withdrawn.

Rejections made under 35 USC 101 and 112 2<sup>nd</sup> paragraph are hereby withdrawn.

The following are responses to the Applicant's arguments regarding the 35 USC 103 rejection of claim 1.

Davidson is analogous to the environment of feeding sheets of paper, which is the same as that of the instant application. The Graef reference is in the environment of a cash dispensing automated banking machine. Both references are analogous art.

The spring of Davidson is considered a resilient tab portion since the definition of "tab" is merely "a projection, flap, or short strip attached to an object to facilitate opening, handling, or identification". Element 208 of Davidson meets this definition.

The housing in Davidson is inherent to one having ordinary skill in the art. It is well known in the art for a sheet-feeding device to comprise a housing. Element 208 of Davidson is on a housing, as is clear from at least figure 1.

Picking member 116 aids in the picking of sheets, while the tab is at an end of the shaft responsible for rotating the picking member. The tab is associated with both the drive shaft and picking shaft, as shown by at least figure 2. The tab is in rotatable supporting connection with the first end of the picking shaft because, as the tab aids in the engagement the second end of the picking shaft with the drive shaft, the first end will rotate as a result of the engagement caused by the biasing of the resilient tab portion. The claim does not state that the tab portion is at a first end of the picking shaft, despite Applicant's argument.

In response to Applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In the original rejection of claim 1, the purpose to modify was cited in C5/L5-19 of Davidson. The Examiner invites the Applicant to reread the Office Action dated 10/28/2005 and the Davidson reference (USP 5,769,410).

The original rejections of claims 1-17 are maintained.

### ***Drawings***

2. The drawings are objected to because of the following in formalities:

- Failing to comply with 37 CFR 1.84(p)(4) because reference characters "154" and "164" have both been used to designate the same part in figure 9.
- Failing to comply with 37 CFR 1.84(p)(4) because reference characters "94" and "80" have both been used to designate the same part in figure 10.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency.

Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Graef  
USP 4,494,747 in view of Davidson USP 5,769,410.

Graef discloses a first end of a picking shaft (14) of a picking member (28) (fig.5), wherein rotation of the picking member is operative to separate end notes bounding a stack of notes one at a time from the stack in a housing in a cash dispensing automated banking machine.

Graef does not expressly disclose a method comprising:

- a) deforming on a housing, a resilient tab portion (208), wherein the tab portion is in rotatable supporting connection with a first end of a picking shaft of a picking member (116)
- b) operatively engaging a second end of the picking shaft of the picking member opposed of the first end, with a rotatable drive shaft, wherein the resilient tab portion axially biases the picking member shaft to maintain engagement with the drive shaft

Davidson teaches a similar method comprising deforming on a housing, a resilient tab portion (208), wherein the tab portion is in rotatable supporting connection with a first end of a picking shaft of a picking member (116) (fig.3-6) operatively

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engaging a second end of the picking shaft of the picking member opposed of the first end, with a rotatable drive shaft, wherein the resilient tab portion axially biases the picking member shaft to maintain engagement with the drive shaft for the purpose of having the ability to remove the picking shaft for roller replacement (C5/L5-19).

At the time of invention it would have been obvious to one having ordinary skill in the art to employ the method steps of deforming on a housing, a resilient tab portion, wherein the tab portion is in rotatable supporting connection with a first end of a picking shaft of a picking member operatively engaging a second end of the picking shaft of the picking member opposed of the first end, with a rotatable drive shaft, wherein the resilient tab portion axially biases the picking member shaft to maintain engagement with the drive shaft, as taught by Davidson, in the method of Graef, for the purpose of having the ability to remove the picking shaft for roller replacement.

5. Claims 2-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graef USP 4,494,747 in view of Davidson USP 5,769,410 further in view of Svyatsky USP 4,607,833.

Graef discloses all the limitations of the claim and further discloses a stripping member (44) biased toward a central disk portion (39) supported on the picking shaft (14), wherein the stripping member is generally operative to prevent all but an end note bounding a stack from being moved from the stack through engagement with the picking member (C8/L8-33). Graef not does not expressly disclose the use of a first leaf

spring portion (58) integrally formed on the housing to bias a stripping member toward a central disk portion on the picking shaft.

Svyatsky teaches the use of a first leaf spring portion (58) integrally formed on the housing to bias a stripping member toward a central disk portion on the picking shaft (fig.3,4) for the purpose of providing a maintained force between the stripping member and central disk portion (C3/L23-29).

At the time of invention it would have been obvious to one having ordinary skill in the art to employ a first leaf spring portion integrally formed on the housing to bias a stripping member toward a central disk portion on the picking shaft, as taught by Svyatsky, in the method of Graef, for the purpose of providing a maintained force between the stripping member and central disk portion.

Regarding claim 3, Graef discloses all the limitations of the claim and further discloses a carry away roll (47), wherein the carry away roll is operative to move notes picked from the stack in engagement with the carry away roll between the central disk portion and the carry away roll (fig.19). Graef does not expressly disclose the use of a second leaf spring portion integrally formed on the housing to bias a carry away roll toward the central disk portion.

Svyatsky teaches the use of a second leaf spring portion (58) integrally formed on the housing to bias a carry away roll toward a central disk portion (fig.3,4) for the purpose of providing a maintained force between the carry away roll and central disk portion (C3/L23-29).



At the time of invention it would have been obvious to one having ordinary skill in the art to employ a second leaf spring portion integrally formed on the housing to bias a carry away roll toward a central disk portion, as taught by Svyatsky, in the method of Graef, for the purpose of providing a maintained force between the carry away roll and central disk portion.

Regarding claim 4, Graef discloses all the limitations of the claim and further discloses the method wherein in (a) the picking member comprises the central disk portion and a first outboard disk portion supported on the picking shaft and disposed on a first transverse side of the central disk portion, and a second outboard disk portion supported on the picking shaft and disposed on a second transverse side of the central disk portion opposed of the first transverse side (fig.7).

Regarding claim 5, Graef discloses all the limitations of the claim and further discloses the method wherein in (a) the central disk portion of the picking member includes a high friction arcuate segment (42), the high friction arcuate segment including a leading area adapted to move a leading edge area of a note engaged therewith between the leading area and the stripping member, and a projecting portion (40) transversely disposed of the leading area, the projecting portion being operative to prevent deformation of the leading edge area (fig.7) (C10/L54-65).

Regarding claim 6, Graef discloses all the limitations of the claim and further discloses the method wherein the picking member in (a) includes the projecting portion, and wherein the projecting portion ceases to extend radially outward beyond the high friction arcuate segment in a termination area, and wherein the first outboard disk

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portion and second outboard disk portion each include a high friction arcuate segment (42a) generally aligned transversely with the termination area (fig.7) (C10/L10-15).

Regarding claim 7, Graef discloses all the limitations of the claim, but does not expressly disclose the method wherein (b) includes an interengaging projection and recess each operatively associated with one of the picking shaft and drive shaft.

Davidson teaches an interengaging projection and recess (210) each operatively associated with one of the picking shaft and drive shaft (fig.2,3) for the purpose of engaging for driving and disengaging for quick and easy replacement of the picking member.

At the time of invention it would have been obvious to one having ordinary skill in the art to employ the use of an interengaging projection and recess each operatively associated with one of the picking shaft and drive shaft, as taught by Davidson, in the method of Graef, for the purpose of engaging for driving and disengaging for quick and easy replacement of the picking member.

Regarding claim 8, Graef discloses all the limitations of the claim and further discloses the method wherein the stripping member is supported on a stripping member support shaft, but does not expressly disclose the method wherein (c) includes operatively engaging the first leaf spring portion on the stripping member support shaft.

Svyatsky teaches a method wherein the first leaf spring portion operatively engages the stripping member support shaft (fig.3,4) for the purpose of biasing the stripping member against the picking member.

At the time of invention it would have been obvious to one having ordinary skill in the art to have the first leaf spring portion operatively engage the stripping member support shaft, as taught by Svyatsky, in the method of Graef, for the purpose of biasing the stripping member against the picking member.

Regarding claim 9, Graef discloses all the limitations of the claim and further discloses the method wherein (c) includes extending the stripping member support shaft in a first slot in supporting connection with the housing (fig.12).

Regarding claim 10, Graef discloses all the limitations of the claim and further discloses the method wherein the carry away roll is in supporting connection with a carry away roll shaft (46), but does not expressly disclose the second leaf spring portion operatively engaging the carry away roll shaft.

Svyatsky teaches the second leaf spring portion operatively engaging the carry away roll shaft (fig.2,3) for the purpose of biasing the carry away roll against the picking member.

At the time of invention it would have been obvious to one having ordinary skill in the art to have the second leaf spring portion operative engage the carry away roll shaft, as taught by Svyatsky, in the method of Graef, for the purpose of biasing the carry away roll against the picking member.

Regarding claim 11, Graef discloses all the limitations of the claim and further discloses the method wherein (d) includes extending the carry away roll shaft in a second slot in supporting connection with the housing (fig.14).

Regarding claim 12, Graef discloses all the limitations of the claim and further discloses the method wherein (c) the stripping member is positioned so as to be adjacent but transversely disposed from the projecting portion when the picking member moves so the leading area and stripping member are in adjacent opposed relation so as to move a leading edge area of a note between the leading area and the stripping member (C10/L54-65) (fig.7,13,14).

Regarding claim 13, Graef discloses all the limitations of the claim and further discloses the method wherein in (d) the carry away roll is transversely disposed of both the stripping member and the projecting portion (fig.12,14).

Regarding claim 14, Graef discloses all the limitations of the claim and further discloses the method further comprising engaging the picking member with an end note bounding a stack of notes in the machine, rotating the picking member, wherein the end note is separated from the stack by relative movement between the central disk portion and the stripping member (fig.5) (C10/L60-65, C11/L8-18).

Regarding claim 15, Graef discloses all the limitations of the claim and further discloses the method further comprising rotating the carry away roll responsive to rotation of the central disk portion, wherein the end note is moved between the carry away roll and the central disk portion (C8/L33-42).

Regarding claim 16, Graef discloses all the limitations of the claim and further discloses the method subsequent to step (d) further comprising receiving at least one input from the user through at least one input device (5,6) of the automated banking

machine, and rotating the picking member responsive to the at least one input (C6/L31-56).

Regarding claim 17, Graef discloses all the limitations of the claim and further discloses the method further comprising delivering the end note from the machine to the user (C1/L32-48).

6. Claims 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graef USPub 2004/0094889 in view of Sheng USPub 2003/0122298.

Graef discloses a similar a method of changing a picking member of a currency dispenser mechanism comprising (c) removing the first picking member from the currency dispenser mechanism (at least ¶0024)

Graef does not expressly disclose the steps of:

(a) moving a resilient tab portion against a biasing force of the tab portion in a direction away from the picking shaft of a first picking member, wherein the tab portion is movable in the direction to permit an end portion of the picking shaft to be removed from supporting engagement with the tab portion

(b) removing the end portion from supporting engagement with the tab portion

(d) subsequent to step (c), placing an end portion of a picking shaft of a second picking member in supporting engagement with the tab portion, wherein the picking shaft of the second picking member is held in supporting engagement with the tab portion via the biasing force of the tab portion

Sheng teaches the steps of:

(a) moving a resilient tab portion (23) against a biasing force of the tab portion in a direction away from the picking shaft of a first picking member (16), wherein the tab portion is movable in the direction to permit an end portion of the picking shaft (15) to be removed from supporting engagement with the tab portion

(b) removing the end portion from supporting engagement with the tab portion

(d) subsequent to step (c), placing an end portion of a picking shaft of a second picking member in supporting engagement with the tab portion, wherein the picking shaft of the second picking member is held in supporting engagement with the tab portion via the biasing force of the tab portion (fig.8) (¶0026)

(e) prior to step (c), disengaging an opposite end portion of the picking shaft of the first picking member from engagement with a drive shaft, wherein the opposite end portion is opposed of the end portion of the picking shaft of the first picking member (since gear 17 drives shaft 15 by way of a motor, and the motor must have corresponding gear to drive gear 17, it must have a drive shaft) (¶0005)

for the purpose of easily removing the roller from the socket for replacement (¶0026).

At the time of invention it would have been obvious to one having ordinary skill in the art to employ the steps of moving a resilient tab portion against a biasing force of the tab portion in a direction away from the picking shaft of a first picking member, wherein the tab portion is movable in the direction to permit an end portion of the picking shaft to be removed from supporting engagement with the tab portion, removing the end portion from supporting engagement with the tab portion, subsequent to step

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(c), placing an end portion of a picking shaft of a second picking member in supporting engagement with the tab portion, wherein the picking shaft of the second picking member is held in supporting engagement with the tab portion via the biasing force of the tab portion, prior to step (c), disengaging an opposite end portion of the picking shaft of the first picking member from engagement with a drive shaft, wherein the opposite end portion is opposed of the end portion of the picking shaft of the first picking member, as taught by Sheng, in the method of Graef, for the purpose of easily removing the roller from the socket for replacement.

7. Regarding claims 20 and 21, Graef discloses a similar method of removing a picking member from an automated teller machine currency dispenser, comprising:

(b) removing the picking member from the ATM currency dispenser (at least ¶0024)

(c) prior to step (b), disengaging the picking member from the drive shaft (shaft shown connected to drive 108)

Graef does not expressly disclose the step of manually biasing a resilient tab portion in a direction away from a picking member to permit the picking member to be removed, wherein the resilient tab portion is integrally formed with a picking member supporting housing, wherein step (a) includes biasing the tab portion from a first position maintaining engagement between the picking member and a drive shaft, to a second position permitting disengagement of the picking member from the drive shaft.

Sheng teaches the step of manually biasing a resilient tab portion (23) in a direction away from a picking member to permit the picking member to be removed, wherein the resilient tab portion is integrally formed with a picking member supporting housing (inherent, if not disclosed), wherein step (a) includes biasing the tab portion from a first position maintaining engagement between the picking member and a drive shaft (drive shaft of motor connected to gear 17), to a second position permitting disengagement of the picking member from the drive shaft (fig.8) for the purpose of easily removing the roller from the socket for replacement (§0026).

At the time of invention it would have been obvious to one having ordinary skill in the art to employ the step of manually biasing a resilient tab portion in a direction away from a picking member to permit the picking member to be removed, wherein the resilient tab portion is integrally formed with a picking member supporting housing, wherein step (a) includes biasing the tab portion from a first position maintaining engagement between the picking member and a drive shaft, to a second position permitting disengagement of the picking member from the drive shaft, as taught by Sheng, in the method of Graef, for the purpose of easily removing the roller from the socket for replacement.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP



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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

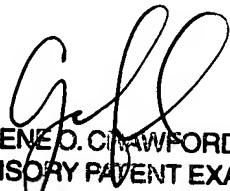
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leslie A. Nicholson III whose telephone number is 571-272-5487. The examiner can normally be reached on M-F, 8:30 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Crawford can be reached on 571-272-6911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

L.N.  
3/14/2006

  
GENE O. CRAWFORD  
SUPERVISORY PATENT EXAMINER